



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,877	07/06/2001	Palle Schneider	10179.204-US	4404

25908 7590 09/26/2002  
NOVOZYMES NORTH AMERICA, INC.  
500 FIFTH AVENUE  
SUITE 1600  
NEW YORK, NY 10110

EXAMINER

EINSMANN, JULIET CAROLINE

ART UNIT PAPER NUMBER

1634

DATE MAILED: 09/26/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/869,877

Applicant(s)

SCHNEIDER ET AL.

Examiner

Juliet C Einsmann

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1634

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 12, 13, 14, and 15, drawn to *Coprinus laccase* variants.

Group II, claim(s) 2, drawn to *Myceliophthora thermophila laccase* variants.

Group III, claim(s) 3-8, drawn to nucleic acids encoding *Coprinus laccase* variants.

Group IV, claim(s) 9 and 10, drawn to methods for inhibiting dye transfer during washing of fabrics.

Group VI, claim(s) 9 and 11, drawn to methods for bleaching a textile.

Groups I, II, IV, and VI are further divided in to a multitude of distinct groups wherein each individual group is drawn to or requires variant *Coprinus laccase* with a particular amino acid sequence. The claims set forth laccase variants that have one or more of seventeen listed mutations. Each of these laccase variants is a separate invention, and applicant should select a

Art Unit: 1634

SINGLE laccase variant for prosecution. Applicant may select a variant with a single mutation or combination of mutations. This is a further restriction requirement under Lack of Unity standards and should not be considered a species election.

Group II is further divided in to a multitude of distinct groups wherein each individual group is drawn to a variant *Myceliophthora thermophila* laccase with a particular amino acid sequence.

The claim sets forth laccase variants that have one or more of fourteen listed mutations. Each of these laccase variants is a separate invention, and applicant should select a SINGLE laccase variant for prosecution. Applicant may select a variant with a single mutation or combination of mutations. This is a further restriction requirement under Lack of Unity standards and should not be considered a species election.

2. The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Groups I, II, III, IV, and VI do not provide a special technical feature over the prior art. The contribution of these groups appears to be the provision of laccase variants. However, such variants and methods of using them are provided by Svendsen et al. (WO 98/38287). Therefore there is no special technical feature that provides a contribution over the prior art that joins these groups.

Laccase variants from *Coprinus* do not share a special technical feature with laccase variants from *M. thermophila* because these variants have different sequences and are thus

Art Unit: 1634

structurally different from one another. Furthermore, within the variants from each species, each molecule containing a different set of mutated amino acids is structurally and functionally distinct from and has a different special technical feature than each other variant enzyme. The chemical structure of each mutation and of each molecule containing the same differ from each other. For example, a laccase comprising a mutation F21 is chemically, structurally, and functionally different from a laccase comprising mutation at Y375. Accordingly, the claims have been separated into a number of groups corresponding to the number of different inventions encompassed by the claims, and the claims will be examined only as they read upon the invention of the elected group. For the same reasons, the remainder of the claims have been separated in a number of groups corresponding to the number of different inventions encompassed thereby.

The groups comprising laccase variants and polynucleotides encoding them which are distinct products lacking the same or corresponding special technical features. The laccase variants are polypeptide enzymes and are composed of amino acids and can be used in such methods as to inhibit dye transfer and bleaching fabrics. The nucleic acids are composed of nucleotides and function in, e.g., methods of nucleic acid hybridization or amplification. As the products of different sets of groups differ from each other in structure, function, and effect, they do not belong to a recognized class of chemical compound, or have both a "common property or activity" and a common structure as would be required to show that the inventions are "of a similar nature."

Further, the different methods have different objectives and require different process steps. The methods for inhibiting dye transfer methods require step adding a laccase variant

Art Unit: 1634

during washing, and in this case, the laccase would be acting on the dyes in the wash solution.

The methods for bleaching a textile require the step of applying a laccase variant to a textile, and in this case the laccase is acting on the textile itself. Claim 9 has been included in both groups 10 and 11 and is generic to these. It will be examined with whichever group is elected. In addition to differences in objectives, effects, and method steps, it is again noted that the claims of the present Groups IV and V utilize many different laccase that do not share the same or common special technical feature for the reasons previously discussed.

3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliet C. Einsmann whose telephone number is (703) 306-5824. The examiner can normally be reached on Monday through Friday, from 9:00 AM until 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the

Art Unit: 1634

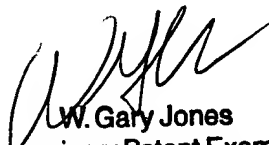
organization where this application or proceeding is assigned are (703) 308-4242 and (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



Juliet C. Einsmann  
Examiner  
Art Unit 1634

September 20, 2002



W. Gary Jones  
Supervisory Patent Examiner  
Technology Center 1600